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ROMANIAN EDUCATIONAL SYSTEM – COMPONENT OF THE NATIONAL ECONOMY

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Abstract. *National economy as a stand-alone entity, is a set of resources (natural, material, human, etc.), production activities, trade, service etc. that have established branches, sectors, etc. at a country's level, between which are established reciprocal links which is based on the material and spiritual movement values, ensures the operation and economic development of society. Thus, the national economy's system appears as a set of interconnected elements through economic, educational, informational, technological, cultural, etc. relations according to a predetermined goal, or serving the same goal.*

Keywords: national economic system, education, cybernetic system, educational system, educational activity

National economy as a stand-alone entity, is a *set of resources* (natural, material, human, etc.), *production activities, trade, service* etc. that have established branches, sectors, etc. at a country's level, between which are established reciprocal links which is based on the material and spiritual movement values, ensures the operation and economic development of society.

The national economy is a set of productive and unproductive activities, historically constituted, carried out within national boundaries and is an expression of cooperation and division of labor within the state and the nation as a distinct historical entity.¹ The basic elements of the national economy are: the national territory, population and natural resources. The economic development of nations, however, depends on the degree of development of productive forces, the volume and quality of economic potential and efficiency of its use, the structure of the branches of the attributes of sovereignty and national independence. As a result of the development process is the **complex national economy**, which is "a coherent set of branches and activities, with clot structure, able to ensure independent development of the country in accordance with their own interests."

The national economy is a complex system composed of a set of elements between which exists a multitude of relationships². The contemporary national economies are distinguished, in general, by territorial size, population, natural resources, climatic conditions etc. but the main differences between them relate to the level of economic development, especially the forces of production, social relations, the economic system, branch structure and the territorial one³. The national economy system is a **complex cybernetic and dynamic system**, and can be defined by the interaction between structure, behavior and function. The established relations depend on the behavior of the national economy systems. These behaviors may include:

- *internal behavior of the national economy's system* caused by changing the structure of the economy under the flow of input;

¹ Dima Ioan Constantin, *Previziune macroeconomică*, Editura Scrisul Românesc, Craiova, 1997;

² Băcescu Marius, Băcescu Angelica - *Macroeconomie - bazele macroeconomiei*, Editura All, București, 1993;

³ Liviu Mihăescu, Diana Faloba, *The Romania facing with the new economy*; International Conference, XIX th Mountain School of Information Technology, Polonia, 2008;

- *external behavior of the national economy's system*, the of transforming the flow of entry into the output stream.

In this sense can be said that the **national economy's system** has an overall behavior determined by the combination of the internal and external behavior. While external behavior is determined by the system's structure, the internal behavior is shown by its functionality. Starting from the main principles of general systems theory, one can appreciate that contemporary national economies are *real and complex systems* that provide the basis for the conduct of the business continuity of social and economic activities based on the following considerations: production units are specialized, division of labor under the national plan; the activities exchange between units is carried out on economic principles relevant for the national economy; number of vital functions of society are organized at governmental and national level; the national economy provides the opportunity to carry out exchanges between the domestic and the international environment; the national economy provides guidance for the flows between its components and the environment.

The components of the national economic system have specific content and functionality, that allow the synthetic definition of it as a group of interdependent components that work together towards a common goal, accepting inputs and producing outputs in an organized process of transformation⁴. All of these form *the map of streams system* of the national economy.

Thus, **the national economy's system** appears as a set of interconnected elements through economic, educational, informational, technological, cultural, etc. relations according to a predetermined goal, or serving the same goal⁵.

For the representation of the production process and resources balancing and the uses of goods, is particularly interesting the classification of the branches. These are regrouping the units which are considered to have an homogeneous production, producing only one product or a group of products. Are chosen such establishments to identify the relationship of a technical-economic production process, independent of the institutional context in which they are developing.

The classification by branches is, in fact, a group of units on the kinds of economic activities. The basis behind this classification is the labor division principle and of labor organizing. Starting from the study of social division of labor, the economic activities are divided into 12 *branches of national economy*⁶.

The economic agent may correspond to an institutional unit or a part of it. Can never belong to two different institutional units. In reality, production units have the most mixed activities or juxtaposed. They exercises, if appropriate, a main activity, secondary activities (specific for other branches) and auxiliary activities (administration, trade, stocks, repair, etc.). This is the case for the activities from tourism field. An activity is auxiliary if it fulfils the following conditions: provides services, the type and the importance is found in all the similar productive units, it provides services only for the manufacturing activity. If a production unit has a main activity, and one or more secondary activities, it will be separated in as many units of homogeneous production and secondary activities are classified separately from the main activity. Auxiliary activities are not separated by the main and secondary activities which they serve.

The branch is a regrouping of units of homogenous production. The branch industry produces goods and services included in the list and only those. The branches are units of analysis of the results that generally can not be observed directly. Branches can be classified into four *categories*, as: branches of market output, branches of non-market production, public administration, branches with a production not destined for the markets of the private administration; branches of services not destined for market produced by households, and household services.

The national economy was gradually developed, to a certain stage of the society's historical development. On the basis of appearance and connection they have a number of premises of which the most important are: the nation, as an essential structural unit of the society's existence; a national territory; a certain level of social division of labor and cooperation developing between countries.

⁴Hitchins Derek, *Putting Systems to Work*, Chicester, John Willey & Sons Ltd. 1992;

⁵ Dobrotă Niță, *Economie politică*, Editura Economică, București. 1997;

⁶ Anuarul Statistic al României, Institutul Național pentru Statistică Economică, 2006;

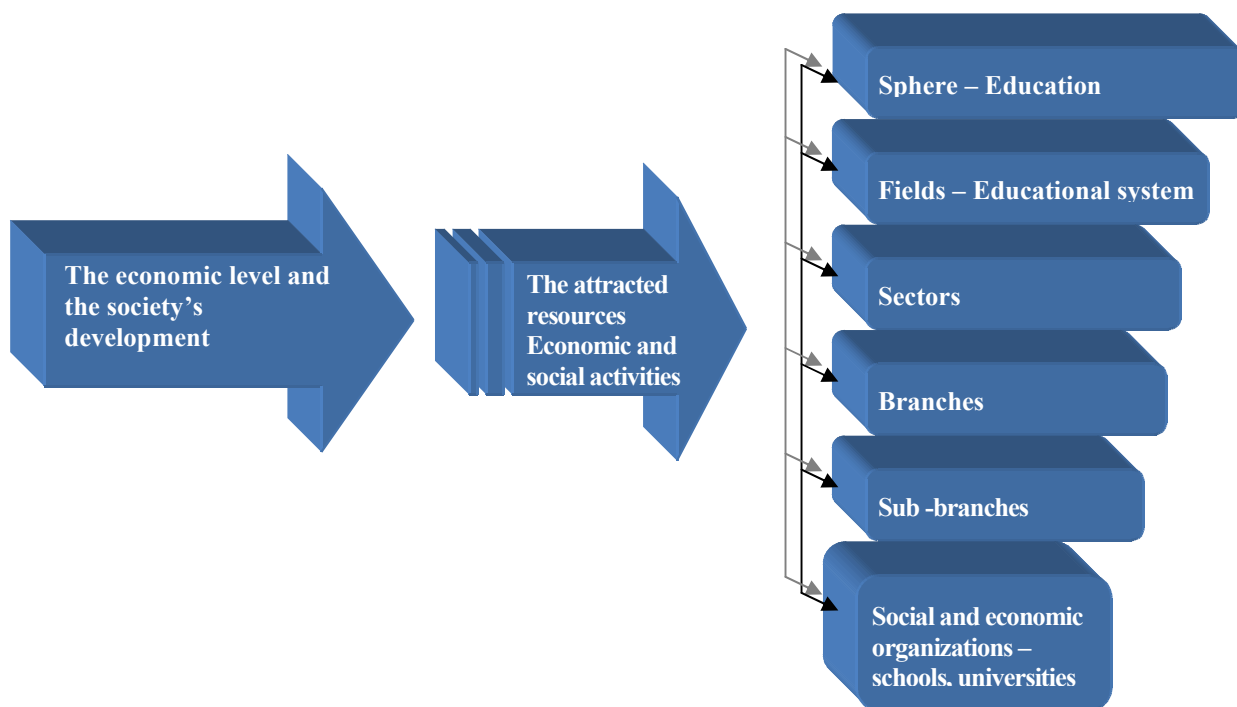


Fig. no. 1.1. Schematic representation of the national economy

In fact, the **national economy** (fig. no. 1.1) is a set of productive and unproductive activities taking place in the organizations, sub-branches, branches, sectors, areas and organizational spheres, which can be positioned and the educational activities⁷.

In accordance with the *CAEN* code, the education in Romania is classified under the *Order Nr. 601 of 26 November 2002 regarding the updating of the classification of the national economy - CAEN* in education division, which includes *public and private education* at any level and any profession, oral or written, also through radio and television.

Is included both the provided training by various higher education institutions in the national education system in its various levels, university and adult education, literacy programs, etc.

The contemporary national economy is constituted as a whole, is very complex and represents the basis for the development of the social reproduction having in view the following considerations: organizations are more specialized, as a result of labor division on a national level; the activities exchange between organizations takes place on a commercial basis; a series of activities, such as those in education, communications, health etc, indispensable to society, are organized by the government; the national economy provides flows orientation between its components and the environment, so that the correlations and the proportions necessary to conduct normal social reproduction⁸. However the national economies of different countries have some differences, since the passage of various state to higher stages of economic development does not occur simultaneously. Due to objective and subjective causes, the progress of some of them came late, so between the national economies of different countries form economic disparities, social, political, etc. whose scale is measured in decades and even centuries. National economy in our era presents the general frame of the society's development, which must be seen in its complexity, where economic and social activities are more diversified and have a high degree of integration and form the national economy complex.

The national economy complex is characterized by⁹: high levels of the relative indicators of the economic activity results; sectorial structures, on branches and in the territory, relatively advanced; high

⁷ Dima Ioan Constantin (coord.), *Economia și gestiunea firmei*, Editura Economică, București, 1999;

⁸ Liviu Mihăescu, Diana Faloba, *The Romania facing with the new economy*; International Conference, XIX th Mountain School of Information Technology, Polonia, 2008;

⁹ Crețoiu Gheorghe, *Economie Politică*, Casa de Editură și Presă „Șansa“, București. 1995.

economic efficiency; high mobility; high capacity for assimilation and dissemination of technical and scientific conquests; strong engagement into the world wide economic circuit.

The reference point for *systemic approach of the national economy* is the general theory of systems, based by the German biologist Ludwig von Bertalanffy (1950), which defines the system as a meeting of interrelated elements¹⁰ that work together towards a common goal using a set of resources. The concept of the system has rather a relative character in the sense that, reported to the analysis purposes, any system can be decomposed into subsystems and, in its turn, can be approached as a subsystem of a more complex system¹¹.

The development of the *systems' theory* has allowed highlighting a special class of systems - self-adjusting - showing the property of holding for certain periods the self-control in the fulfilling of the final goal. In this category falls the cyber systems characterized by the appearance of reverse connection found at base of the adjustment function and of the system's inputs and outputs.

The cyber and economic system is a set of ordered items, including inter-conditioning relations between them, and of their properties or attributes. In this context, the cybernetic system has certain *properties* which show specificity, flexibility and complexity of it, namely: has its own functions and attributes, different from the more complex formations in which it integrates; acts as a part, in comparison with the more comprehensive and as a system in relation to its own components; performing a multitude of complex activities.

Inter-conditioning or connections are the reports established between the economic and cybernetic system during its operation and may be causative, coordinating or subordination.

Taking into account the above-mentioned it can be concluded that the national economy is a **complex cybernetic system**¹². For defining the cybernetic system of the national economy is adopted the hypothesis of relative informational isolation and absolute penetration of energy and matter, accepting that the information outputs are controllable and observable, which allows to build up the **informational-decisional process** - in managerial activity.

Like any **cybernetic system**, the **national economy** presents a number of **properties**, such as: the multitude of behaviors, the dirigible character; the ability to co-work with the environment; the existence of information channels within and between them the environment too; the existence of some connections between various channels of information; the complete behavior; the probabilistic nature; balancing property; capacity of self-adjusting.

The national economy system is an **open system**. As a component of the global economy, national economy is interdependent with other parts of the world economy, driven by participation in international division of labor, flows of goods and services, capital flows and information flows¹³.

To have a more complete picture on the national economy, and its superior form and organization development, national economic complex, it is necessary to know the structure, which allows the knowledge of the national economy as a whole and its internal composition (Fig. No. 1.2).

The structure of the national economy reflects its component elements, nature and the characteristics of these components, the role played by each element's position within the whole and the ties and their mutual interaction.

National economy as the **macro-system**, is structured both at a **horizontal level** on spheres, sectors, branches, sub-branches, etc. and at the **vertical hierarchical levels**¹⁴.

Horizontally, the national economy is divided in terms of content, into four sectors, given the type of work carried out in the component organizations namely:

- **the primary sector** - which includes organizations which use particular natural factors;
- **the secondary sector** - group the converting organizations natural-factors and the industries of manufacturing and construction industry, where the share of fixed capital is essential;

¹⁰ Oprea Dumitru, *Analiza și proiectarea sistemelor informațional economice*, Editura Polirom, București, 1999.

¹¹ Păun Mihai, *Analiza sistemelor economice*, Editura All, București, 1997.

¹² Băcescu M., Băcescu A., *Macroeconomie. Bazele macroeconomiei*, Editura All, București, 1993

¹³ Păun Mihai, *Analiza sistemelor economice*, Editura All, București, 1997;

¹⁴ Dima.I.C., *Management*, Editura AGIR, București, 2000;

- **tertiary sector** - called the service provider sector, includes: *educational institutions*, financial institutions, commercial organizations, distribution and transport organizations, etc.;
- **quaternary sector**, which includes scientific research, technological development, design, etc., and has very high contribution to the development of overall national economy¹⁵.

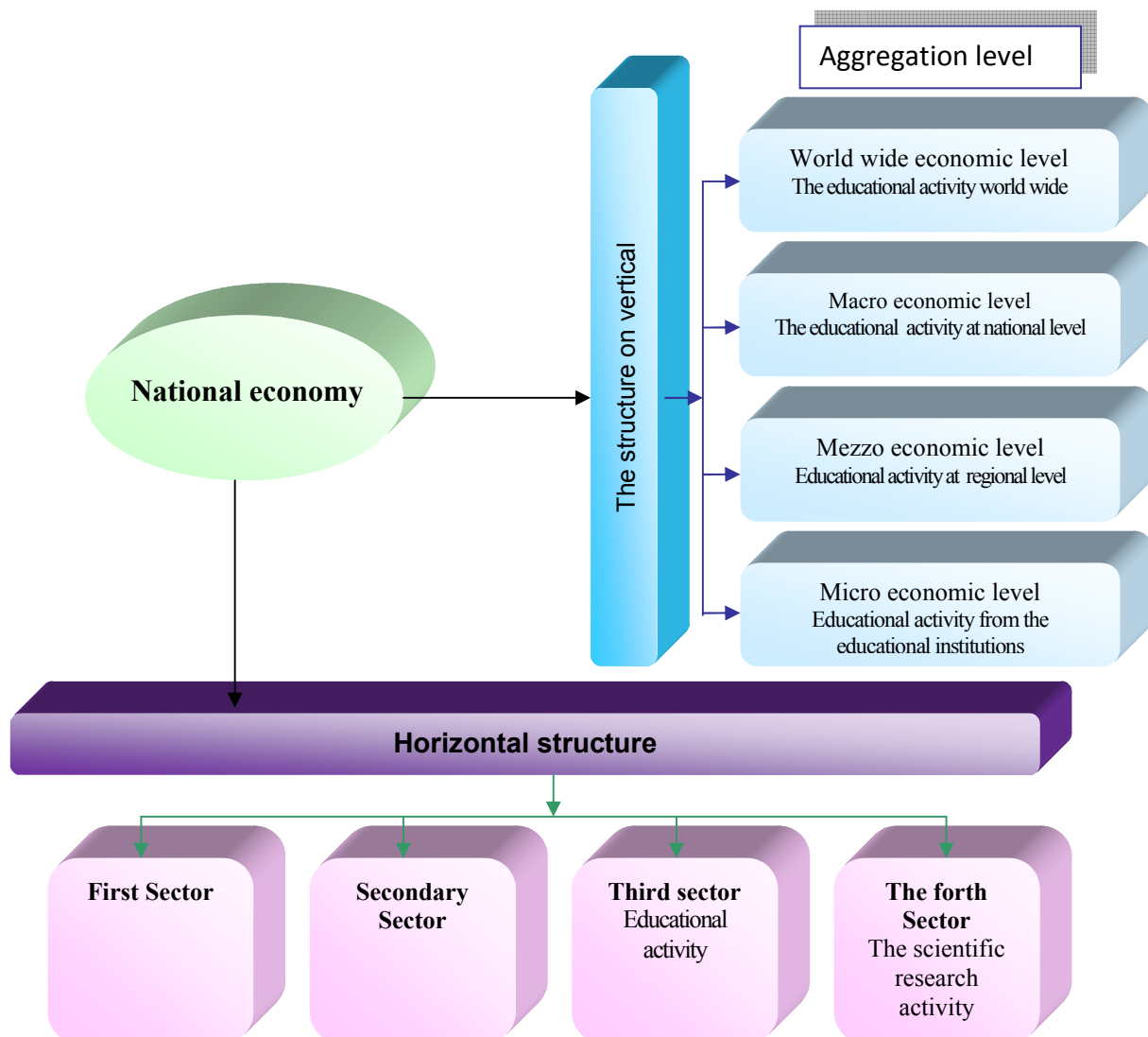


Fig. nr. 1.2. The structure of the national economy in horizontal and vertical

For the representation of production processes, balancing the resources with the needs of a particular importance lies in the **structure of national economy branches**.

Branch of the national economy is actually a fully homogeneous or a related activity, grouped as a result of the social division of labor, which is conducted in specialized units or mixed character and manifests itself in certain products and services. Classification of the branches is grouping the organizations on the types of activities. The basis behind this classification is the principle of division of labor and the organizational principle. Starting from the current division of labor, economic activity is divided into **12 branches of the national economy**¹⁶: agriculture, forestry, logging and hunting, fishing and fish farming, industry, construction, trade, hotels and restaurants, transport and storage, post and

¹⁵ Dima Ioan Constantin (coord.), *Economia și gestiunea firmei*, Editura Economică, București, 1999;

¹⁶ *Anuarul statistic al României*, Institutul Național pentru Statistică, București, 2006;

telecommunications, banking, financial and insurance, public administration, **education**, health and social activities; other activities.

The activities developed in all branches of national economy are supplementing each other, aiming to meet social needs. Between branches of national economy shall be established correlations that reflect the interdependence of activities in society. The interrelated development of the branches of the national economy is the premise of ensuring the state of dynamic equilibrium, necessary in the development process.

To describe the income flows and expenditure and financial flows using the **classification of economy on sectors**, called institutional sectors. The choice of such a type of organization is needed if the aim is to describe the relationship of behavior which prevails in revenues, expenses and financial operations.

Using two types of clusters allows to distinguish one part where flows are analyzed on branches (tables input - output) and a part which deals with operations on sectors (sectors accounts).

The vertical structure¹⁷ allows grouping of following levels:

- **micro - economic level** is that which relates to economic phenomena and processes as well as the functional and causal links occurring between economic organizations, which have the public capital, private or mixed, and their workers. They cooperate with each other and develop a dense network of supply relationships, sales, and cooperation in production. Here they place educational institutions such as schools, kindergartens, schools, universities, etc., being considered as the basic economic entities;
- **mezo- economic level** activities aimed at industries or regions, administrative or territorial zones - geographically. Are included here the school inspectorates activity or the university's activities at regional level;
- **macro- economic level** represents all forms of life seen in the economy perceive at the relations level between the spheres of social reproduction, between the branches or at the national economy level, which included MEC's activities;
- **mondo- economic level** contains the national economies in their interdependence being a complex system that includes, in addition to national economies, interconnections and relationships between them, the world economic circuit, the international division of labor, international institutions, where they found work and education worldwide¹⁸.

Systemic approach of the *national economy* allows that the educational activity to be treated through the **Romania National education system**, considered as a set of elements or subsystems united by certain economic principles, specific to the contemporary economy in order to meet demands imposed by training activities and population education¹⁹. Given that the education system includes a set of social institutions (political, economic, and cultural) which, directly and / or indirectly, explicitly and / or implicitly meet educational functions, training, in the sense of educational management through which undertakes the responsibility of all social factors. Educational managers' practices reflect not only such general requirements, but also targets relationships between *educational level*, *economic level* and of society's development (see also fig.no.1.1).

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